

WHAT IS CLAIMED IS:

[1] A rotary table system comprising:  
a guide apparatus; and  
a rotary table mounted on said guide apparatus;  
5 said guide apparatus including a ring-shaped  
integrated rail having no discontinuity in a travel  
direction thereof, and a plurality of guide blocks that  
are assembled to said rail from a direction of their  
surfaces opposing said rail;  
10 wherein a surface of said rail opposite to a surface  
thereof opposing said guide blocks and an underside of  
said rotary table are joined together.

[2] A rotary table system according to claim 1, wherein  
said rail has a substantially L-shaped cross-sectional  
15 configuration formed from a vertical portion and a  
horizontal portion extending from an upper end of said  
vertical portion in a radial direction of said rotary  
table.

[3] A rotary table system according to claim 1 or 2,  
20 further comprising:  
a detecting mechanism that detects an amount of  
rotation of said rotary table;  
wherein a tape scale that is to be detected by said  
detecting mechanism is provided on an outer peripheral  
25 surface of said rail.

[4] A rotary table system according to any one of claims  
1 to 3, further comprising:  
mounting sections having mounting surfaces to which

said guide blocks are secured, said mounting sections being equally spaced along a same circumference on a base that is a separate member from said rail and guide blocks.

[5] A rotary table system according to any one of claims 5 1 to 4, wherein said rail has a plurality of rolling element rolling surfaces formed along the travel direction of said rail;

    said guide blocks each including:

10   a guide block body having load rolling element rolling surfaces that form load rolling element rolling passages in cooperation with said rolling element rolling surfaces, said guide block body further having rolling element relief bores associated with said load rolling element rolling surfaces; and

15       end plates provided at both ends of said guide block body in the travel direction of said rail, said end plates each having rolling element direction change passages that form rolling element recirculation passages in cooperation with said load rolling element rolling passages and 20 rolling element relief bores.